

1. A safety syringe sealing system, the system comprising:
a safety syringe having a barrel, a needle, a plunger and a needle sheath,
wherein the needle sheath is movable between a retracted position where the needle is
exposed, to an extended position where the needle is protected, the needle sheath defining an
open end; and
a plug that is engageable with the needle sheath when the needle sheath is in
the extended position.
2. The system of claim 1, wherein the needle sheath is tubular.
3. The system of claim 2, wherein the tubular needle sheath when in the extended
position is locked and prevented from returning to the retracted position.
4. The system of claim 2, wherein the tubular needle sheath is capable of sliding
longitudinally between the retracted position and the extended position and may be
rotated about the barrel of the safety syringe to lock the tubular needle sheath in the
extended position.
5. The system of claim 1, wherein the plug includes at least one receptacle to engage an
outer circumference of the needle sheath.
6. The system of claim 1, wherein the plug includes a cylindrical portion having at least
one flange extending radially outward from the cylindrical portion to engage an inner
circumference of the needle sheath.

7. A safety syringe sealing system, the system comprising:
- a safety syringe having a barrel, a needle, a plunger and a needle sheath, wherein the needle sheath is movable between a retracted position where the needle is exposed, to an extended position where the needle is protected and the needle sheath defining an open end;
- a plug that is engageable with the needle sheath when the needle sheath is in the extended position; and
- a pharmaceutical pig having a base and a cap, the base and cap each having a hollow center section that is capable of receiving the safety syringe.
8. The system of claim 7, wherein the needle sheath is tubular.
9. The system of claim 8, wherein the tubular needle sheath when in the extended position is locked and prevented from returning to the retracted position.
10. The system of claim 8, wherein the tubular needle sheath is capable of sliding longitudinally between the retracted position and the extended position and may be rotated about the barrel of the safety syringe to lock the tubular needle sheath in the extended position.
11. The system of claim 7, wherein the plug includes at least one receptacle to engage an outer circumference of the needle sheath.

12. The system of claim 7, wherein the plug includes a cylindrical portion having at least one flange extending radially outward from the cylindrical portion to engage an inner circumference of the needle sheath.
13. The system of claim 7, wherein the base and cap of the pharmaceutical pig interact to seal the safety syringe within the pharmaceutical pig.
14. A method for sealing a safety syringe comprising:

sliding a needle sheath from a retracted position where a needle is exposed, to an extended position where the needle is protected, the needle sheath defining an open end;

and

engaging a plug with the needle sheath when the needle sheath is in the extended position.
15. The method of claim 14, further including locking the needle sheath, having a tubular shape, when the needle sheath is in the extended position to prevent the needle sheath from returning to the retracted position after the needle sheath is slid from the retracted position to the extended position.
16. A method for sealing a safety syringe comprising:

sliding a needle sheath from a retracted position where a needle is exposed, to an extended position where the needle is protected, the needle sheath defining an open end;

and

engaging a plug around an outer circumference proximate the open end of the needle sheath when the needle sheath is in the extended position.

17. The method of claim 16, further including locking the needle sheath, having a tubular shape, when the needle sheath is in the extended position to prevent the tubular needle sheath from returning to the retracted position after the needle sheath is slid from the retracted position to the extended position.

18. A method for plugging a safety syringe comprising:

sliding a tubular needle sheath from a retracted position where a needle is exposed, to an extended position where the needle is protected, the tubular needle sheath defining an open end;

locking the tubular needle sheath into the extended position; and

engaging a plug, having a cylindrical portion and at least one flange extending radially therefrom, with the open end of the needle sheath in the extended position.

19. A method for plugging a safety syringe comprising:

sliding a tubular needle sheath from a retracted position where a needle is exposed, to an extended position where the needle is protected, the tubular needle sheath defining an open end;

locking the tubular needle sheath into the extended position; and

engaging a plug, having at least one u-shaped receptacle with an outside circumference of the needle sheath in the extended position.

20. A method for sealing a safety syringe comprising:

inserting a plug in a hollow center section of a base of a pharmaceutical pig having a cap;

sliding a needle sheath from a retracted position to an extended position where the needle is protected, the needle sheath defining an open end;

inserting the safety syringe with the needle sheath into the hollow center section of the base of the pharmaceutical pig; and

engaging the plug in the open end of the needle sheath in the extended position.

21. The method of claim 20, further including locking the needle sheath, having a tubular shape, when the needle sheath is in the extended position to prevent the tubular needle sheath from returning to the retracted position after the needle sheath is slid from the retracted position to the extended position.

22. The method of claim 21, wherein locking the needle sheath further includes rotating the needle sheath about the barrel of the safety syringe.

23. The method of claim 22, wherein the inserting the safety syringe with the needle sheath into the hollow center section of the base of the pharmaceutical pig further includes sealing the base and cap of the pharmaceutical pig together to contain the safety syringe within the pharmaceutical pig.

24. A method for sealing a safety syringe comprising:

inserting a plug in a hollow center section of a base of a pharmaceutical pig having a cap;

sliding a needle sheath from a retracted position to an extended position where the needle is protected, the needle sheath defining an open end;

inserting the safety syringe with the needle sheath into the hollow center

section of the base of the pharmaceutical pig; and

engaging the plug with an outside circumference of the needle sheath in the extended position.

25. The method of claim 24, further including locking the needle sheath, having a tubular shape, when the needle sheath is in the extended position to prevent the tubular needle sheath from returning to the retracted position after the needle sheath is slid from the retracted position to the extended position.

26. The method of claim 25, wherein locking the needle sheath further includes rotating the needle sheath about the barrel of the safety syringe.

27. The method of claim 26, wherein the inserting the safety syringe with the needle sheath into the hollow center section of the base of the pharmaceutical pig further includes sealing the base and cap of the pharmaceutical pig together to contain the safety syringe within the pharmaceutical pig.

28. A method for sealing a safety syringe comprising:

sliding a needle sheath from a retracted position where a needle is exposed, to an extended position where the needle is protected, the needle sheath defining an open end;

engaging a plug with the open end of the needle sheath when the needle sheath is in the extended position; and

inserting the safety syringe with the needle sheath into a hollow center section of a base of a pharmaceutical pig.

29. The method of claim 28, further including:
- locking the needle sheath, having a tubular shape, when the needle sheath is in the extended position to prevent the needle sheath from returning to the retracted position after the needle sheath is slid from the retracted position to the extended position.
30. The method of claim 29, wherein locking the needle sheath further includes rotating the needle sheath about a barrel of the safety syringe.
31. The method of claim 30, wherein the inserting the safety syringe with the needle sheath into a hollow center section of a base of a pharmaceutical pig further includes sealing the base and a cap of the pharmaceutical pig together to contain the safety syringe within the pharmaceutical pig.